



UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/053,040	04/01/98	KUDO	1 KANHA3111.01

SPENCER & FRANK
1100 NEW YORK AVENUE NW
SUITE 300
WASHINGTON DC 20005-3955

MM92/0604

EXAMINER

FRECH, K

ART UNIT

PAPER NUMBER

2876

DATE MAILED:

06/04/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/053,040

Applicant(s)

KUDO, ISAO

Examiner

Karl D Frech

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the minimum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 26 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

Art Unit: 2876

1. The request filed on 3/26/01 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/053,040 is acceptable and a CPA has been established. An action on the CPA follows.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-21 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Merlin et al in view of Shamir. Merlin teaches a semiconductor device 1 having some mark patterns thereon 20 for information management provided at each of chips arrayed on a wafer surface (11,12,13) as chip ID information wherein the chip ID information includes chip information inherent to each chip. Merlin teaches of marking the wafer surface with one or more indicia, he is silent with respect to the ID information to be in a two-dimensional bar code pattern. Shamir teaches an IC wafer including a micro-bar coded indicia 128 and an alphanumeric indicia 130 for identification and for inventory purposes. It would have been obvious to person of ordinary skill in the art at the time the invention was made to replace the codes of Merlin with the micro-bar codes of Shamir. This would be an obvious design choice driven by the ability of bar coded indicia to contain vast amounts of information. One of ordinary skill in the art at the time the invention was made would employ the conventional means for chip ID information is projected and exposed using a liquid crystal mask that is capable of changing light transmitting pattern for

Art Unit: 2876

each exposure to the teachings of Merlin and Shamir in order to provide Merlin and Shamir with a more secure system/device wherein the ID information cannot be detected by the naked eye.

Furthermore, to record ID information as discussed above would have been an alternative means for recording data/information onto the wafer surface, and therefore an obvious expedient as taught by Merlin and Shamir. Although Merlin and Shamir teaches the means for encoding the ID information on the wafer surface of the semiconductor device, Merlin and Shamir are silent with respect to means for providing ID information on a lead frame and/or outer surface of a resin-sealed semiconductor chip. However, one of ordinary skill in the art at the time the invention was made would have contemplated in placing /recording ID information on a semiconductor device on each chip, either on the chip itself or on the lead frame, outer surface of a resin-sealed semiconductor device due to the fact that such a modification would have constituted an alternative means for placing/recording the two dimensional bar code patterns on a semiconductor device at different locations, and therefore would have constituted an obvious design variation, failing to provide any unexpected results, well within the ordinary skill in the art. With respect to the two-dimensional bar code pattern is formed by means of photolithography, applicant admits as seen in the response of 4/2/01 that photolithography in such an environment is known and used. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use photolithography in order to utilize existing infrastructure and thus cut cost of production.

REMARKS

Art Unit: 2876

4. Applicant's arguments filed 3/26/01 have been fully considered but they are not persuasive. Applicant incorporates by reference the arguments presented in response filed 6/21/00. The examiner refers to the examiner's reasoning as seen in the final rejection of paper number 8 mailed 7/27/00.
5. Applicant disagrees with the examiner's position that Shamir suggests a duplication of elements taught by Merlin/Shamir combination. The examiner respectfully disagrees. The examiner acknowledges that the phrase "duplication of elements" was used in the rejection. However, it is pointed out that this is not the only reasoning as provided by the examiner in support of the combination of Merlin and Shamir. Further, in lack of any specific claim of the specific two dimensional bar code structure, the examiner disagrees that the duplication of elements position is erroneous. Take the PDF417 structure for example, which is well known and widely used in the industry and in personal everyday life. This is essentially a "stacking" of one dimensional bar codes to form a two dimensional bar code which is capable of containing much more information than the single one dimensional bar code. Thus, the duplication of elements is present. However, as now seen above, the examiner further expands that the replacement of a one dimensional bar code with a two dimensional bar code for other reasoning is obvious.
6. Applicant argues the indicia being placed on the chip itself is not taught by the combination of Merlin and Shamir. The examiner respectfully disagrees, as seen above, as the positioning of the indicia is a design choice. It is noted that applicant has stated that photolithography of indicia on semiconductor surfaces is well known. Therefore, the examiner maintains to use the

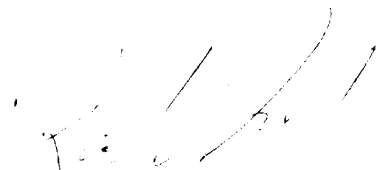
Art Unit. 2876

photolithography process to place the indicia on the chip surface would only require routine skill with no undue experimentation.

7. Applicant alleges that placing the indicia on a lead frame or resin sealed semiconductor chip is not obvious, but offers no substantive support for this allegation.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl Frech whose telephone number is (703) 305-3491. The examiner's supervisor is Michael Lee whose telephone number is (703)305-3503. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center receptionist whose telephone number is (703)308-0956. The Tech Center fax number is (703) 308-7722.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [karl.frech@uspto.gov]. All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.



Karl D. Frech
Primary Examiner, AU 2876
June 01, 2001